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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/453,498	12/03/1999	BRUCE R. SMITH	013550-069	2714
7590 05/13/2004 MICHAEL W. FERRELL, ESQ. FERRELLS, PLLC P.O. BOX 312 CLIFTON, VA 20124-1706			EXAMINER KIM, EUGENE LEE	
			ART UNIT 3721	PAPER NUMBER

DATE MAILED: 05/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/453,498	<b>Applicant(s)</b> SMITH ET AL.	
	<b>Examiner</b> Eugene L Kim	<b>Art Unit</b> 3721	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on 12 April 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-26 is/are pending in the application.  
     4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 22 is/are allowed.
- 6) ☒ Claim(s) 1-21, 23-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-21, 23-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Van Handel et al (#4,721,500) in view of Gospe et al (#6,029,730). Handel et al substantially show the claimed subject matter including a female and male die wherein the dies are heated with electrical resistance heaters. The heaters are not shown. Handel also discloses thermistors mounted in the dies as close as possible to the forming surfaces. (Col 7 lines 65 - col 8 line 2). Handel does not disclose the exact heating elements as claimed Gospe et al disclose that a heater assembly in a cast-in method wherein the heating element is cast in a platen (col 4 lines 48+). Gospe et al disclose that the foil heater 62, which includes a resistor line, which is an electrically conductive material such as, nickel chromium, can be replaced with various thermoelectric devices, such as a cast-in heater. Gospe et al disclose a top and bottom plate 22, 24 that are made from an alloy material, such as, stainless steel (col 3 lines 25+). Gospe et al disclose that the heating elements are inserted in holes/recesses 30. It would have been obvious to one of ordinary skill in the art at the time of the invention to provide Handel with a heating element as taught by Gospe et al to use an alternative

Art Unit: 3721

known thermoelectric device. Since the primary reference, Handel discloses upper and lower resistance heaters, it would have been obvious to provide Handel with heater elements as taught by Gospe et al on both the upper and lower dies to provide for efficient temperature control on the heating surfaces. Regarding the actual materials being claimed, such as, the cast-in material being ferrous or non-ferrous based alloys, the examiner notes that selection of material on the basis of suitability for the intended use is entirely obvious. See *in re Leshin*, 125 USPQ 416 (CCPA 1960). The examiner takes official notice that it is well known in the art to use resistive wires as heating elements. Regarding the annular shape of the cast-in heaters as claimed, Gospe et al disclose that the heater is placed within recesses 30 which infers that the heater 32 would be annular in shape to fit into the recess/hole 30.

3. Claim 22 is allowed.

3. Applicant's arguments filed 4/12/2004 have been fully considered but they are not persuasive.

In response to applicant's argument regarding the Declaration of Mr. Mark B. Littlejohn, the examiner notes that secondary reference Gospe et al is being used to teach the concept that cast-in heaters are interchangeable with various heating elements as discussed in col 4 lines 48+. Therefore, the combination is deemed proper and obvious to one of ordinary skill in the art. Furthermore, the examiner notes that mere selection of known materials, such as cast-in heaters, on the basis of suitability for the intended use would be entirely obvious. See *in re Leshin*, 125 USPQ 416 (CCPA 1960).

The examiner also notes that the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981). In this case, the secondary reference teaches that cast-in heater are interchangeable with various heating elements as discussed supra and, therefore, it would have been obvious to interchange the heating means of van Handel et al with the cast-in heater means of Gospe et al to use an alternative known thermoelectric device.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eugene L Kim whose telephone number is 703 308-1886. The examiner can normally be reached on Tuesday-Friday 8 a.m. to 6 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rinaldi Rada can be reached on 703 308-2187. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 3721

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Eugene L Kim  
Primary Examiner  
Art Unit 3721